

Appl. No. 10/828,362
 Amdt. Dated 03/13/2006
 Reply to Office action of December 13, 2005
 Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A tire building drum having an axis and a centerplane intersecting the axis, comprising:
 - a plurality of axially extending, circumferentially spaced-apart expanding segments, each of said expanding segments being expandable from a first radius in a collapsed condition of said drum to a second radius in an expanded condition of said drum;
 - a pair of flanges centered about the axis at a fixed distance from one another;
 - a plurality of ramp elements, each supporting an expanding segment, disposed between the flanges and radially ~~moveable~~ guided between the flanges;
 - ~~at least one~~ two conical element ~~elements~~, each disposed coaxially between the pair of flanges, axially movable therebetween, and having a tapered face;
 - wherein the tapered face of ~~the at least one conical element~~ each of the two conical elements engages an inner surface of the ramp elements for forcing the expanding segments radially outward from the axis;
 - characterized in that:
 - there are two conical elements, each ~~frustoconical~~ frustoconical disposed coaxially with their bases facing each other; and
 - the inner surfaces of the ramp elements are V-shaped; and
 - a plurality of base members supporting a plurality of fixed segments; and
 - in each flange, a first plurality of grooves for receiving opposite side edges of the plurality of base members.
2. (Original) Tire building drum, according to claim 1, wherein when the conical elements move farther apart from one another, they urge the ramp elements radially outward from the axis.
3. (Currently amended) Tire building drum, according to claim 1, further comprising:
 - in each flange, a ~~first~~ second plurality of grooves disposed on an inner surface thereof and extending radially from the axis, for radially guiding the plurality of ramp elements.
4. (Cancelled)
5. (Currently amended) A tire building drum having an axis and a centerplane intersecting the axis, comprising:
 - a plurality of axially extending, circumferentially spaced-apart expanding segments, each of said expanding segments being expandable from a first radius in a collapsed condition of said drum to a second radius in an expanded condition of said drum;
 - a pair of flanges centered about the axis at a fixed distance from one another;
 - a plurality of ramp elements, each supporting an expanding segment, disposed between

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the flanges and radially guided between the flanges;

two conical elements, each disposed coaxially between the pair of flanges, axially movable therebetween, and having a tapered face;

wherein the tapered face of each of the two conical elements engages an inner surface of the ramp elements for forcing the expanding segments radially outward from the axis;

characterized in that:

there are two conical elements, each frustoconical disposed coaxially with their bases facing each other;

the inner surfaces of the ramp elements are V-shaped;

a plurality of base members supporting a plurality of fixed segments;

in each flange, a plurality of grooves for receiving opposite side edges of the plurality of base members; and

Tire building drum, according to claim 1, wherein:

the conical elements have notches at circumferential positions about the outer surface of their respective bases for receiving a bottom edge of the base members.

6. (Original) Tire building drum, according to claim 1, wherein:
the expanding segments, ramp elements, flange and conical elements are all located in a center section of the drum.
7. (Original) Tire building drum, according to claim 1, wherein:
both of the two conical elements exerts a force on each of the ramp elements.
8. (Original) Tire building drum, according to claim 7, wherein:
the forces exerted by each of the two conical elements are symmetrical about the centerplane.
9. (Original) Tire building drum, according to claim 1, further comprising:
a plurality of fixed segments disposed between the plurality of expanding segments.
10. (Original) Tire building drum, according to claim 1, wherein:
end portions of the expanding segments are contoured to have pockets for receiving components of a tire carcass being laid up on the drum.
11. (Original) Tire building drum, according to claim 1, further comprising:
biasing members exerting a collapsing radial force on the ramp elements.

Claims 12 through 20 were canceled.